What is claimed is:

1. A method for improving adhesion between two adjacent layers of a laminate membrane, comprising the steps of:

(a) forming a laminate having a first thermoplastic layer adjacent to a second thermoplastic layer;

(b) annealing the laminate at a temperature above a thermal transition temperature of at least one polymeric component of at least one of the layers for a time sufficient for the at least one polymeric component to partially diffuse into the adjacent layer.

2. A method according to claim 1, wherein the annealing temperature is at least about 50°C above the thermal transition temperature of the at least one polymeric component.

3. A method according to claim 1, wherein at least one of the first and second layers includes a semicrystalline polymeric component.

4. A method according to claim 1, wherein the first layer is a thermoplastic elastomer layer and the second layer is a thermoplastic polymeric barrier layer.

5. A method according to claim 1, wherein the laminate is annealed for at least about 15 minutes.

6. A method according to claim 1, wherein the laminate is annealed for at least about 30 minutes.

7. A method according to claim 1, wherein the laminate is annealed for at least about 40 minutes.

8. A method according to claim 1, wherein the laminate membrane is annealed at a temperature above a thermal transition temperature of at least one component of each of the first and second layers.

9. A method according to claim 1, wherein the laminate is annealed at a temperature at least about 80°C above a thermal transition temperature of said at least one polymeric component of at least one of the layers.

10. A method according to claim 4, wherein the laminate is formed into a shape by blow molding before the annealing step.

11. A method according to claim 10, wherein the annealing step is carried out within about 2 hours of the blow molding.

12. A method according to claim 10, wherein the annealing step is carried out within about 1.5 hours of the blow molding.

13. A method according to claim 10, wherein the annealing step is carried out within about 1 hour of the blow molding.

14. A method according to claim 10, wherein the annealing step is carried out within about 30 minutes of the blow molding.

15. A method according to claim 10, wherein the annealing step is carried out within about 15 minutes of the blow molding.

16. A method according to claim 4, wherein the annealing step is carried out at a temperature of at least about 100°C.

17. A method according to claim 4, wherein the annealing step is carried out at a temperature of up to about 150°C.

18. A laminate formed according to the method of claim 4, wherein the first layer comprises a thermoplastic polyurethane prepared from a polyester diol and the second layer comprises an ethylene-vinyl alcohol copolymer.

19. A laminate formed according to the method of claim 18, further comprising at least a third layer comprising a thermoplastic polyurethane prepared from a polyester diol that is adjacent to the second layer.

20. A laminate formed according to the method of claim 10, wherein the first layer comprises a thermoplastic polyurethane prepared from a polyester diol and the second layer comprises an ethylene-vinyl alcohol copolymer, and further wherein said blow molding step provides a bladder that is sealed and inflated after the annealing step.

21. A ball comprising a bladder prepared according to claim 20.

22. A shoe, comprising a bladder prepared according to claim 20.

23. A laminate according to claim 20, wherein said polyurethane includes at least about 50 percent by weight of the polyester diol.

24. A laminate according to claim 20, wherein said polyurethane includes at least about 60 percent by weight of the polyester diol.

25. A laminate according to claim 20, wherein the polyester diol has a weight average molecular weight of at least about 2000.

26. A method according to claim 1, wherein at least one of the polymeric components of at least one of the first and second layers has a glass transition temperature in the range of from about -30°C to about 20°C.

27. A method according to claim 4, wherein the thermoplastic elastomer layer comprises a material selected from the group consisting of polyurethanes prepared using polyester, polyether, and polycarbonate diols, flexible polyolefins, styrenic thermoplastic elastomers, polyamide elastomers, polyamide-ether elastomers, polymeric ester-ether elastomers, flexible ionomers, thermoplastic vulcanizates, vulcanized EPDM in polypropylene;, flexible poly(vinyl chloride) homopolymers and copolymers, flexible acrylic polymers, and combinations thereof.

28. A method according to claim 4, wherein the thermoplastic polymeric barrier layer comprises a material selected from the group consisting of ethylene-vinyl alcohol copolymers, vinylidene chloride polymer, acrylonitrile polymer, copolymers of acrylonitrile and methyl acrylate, semicrystalline polyesters, polyethylene terephthalate, polyamides, crystalline polymers, epoxy resins based on N,N-dimethylethylenediamine and resorcinol, polyurethane engineering thermoplastics, and combinations thereof.

29. A laminate according to claim 20, wherein the laminate has a gas transmission rate of less than about 6 cubic centimeters per square meter per atmosphere per day ($cc/m^2 \cdot atm \cdot day$).